REMARKS

After entry of this amendment, claims 33-55 are pending, of which claims 53-55 are withdrawn. Applicants hereby request non-entry of the previously filed unentered Request for Reconsideration and Information Disclosure Statement. Applicants request that the amendments above with the following remarks and the attached Information Disclosure Statement be entered. Claims 39 and 52 are amended without prejudice to or disclaimer to correct inadvertent typographical errors. The amendments find support *inter alia* in the original claims, further support can be found in the specification at page 3, lines 22-23. No new matter has been added.

Applicants enclose herewith a Request for Continued Examination requesting entry of the amendments and remarks and the references on the attached Information Disclosure Statement, some of which were cited in co-pending U.S. Application Serial No. 10/018,339. The present amendments and following remarks address the rejections in the Final Office Action dated October 3, 2007.

The withdrawn claims depend from or otherwise include all the limitations of claim 33. Should claim 33 be found allowable, the withdrawn claims which depend from or otherwise include all the limitations of claim 33 are requested to be rejoined. See MPEP § 821.04.

Rejections Under 35 U.S.C. § 102

Claims 33-34, 38-39, 41-42, 45-49 and 52 were rejected under 35 U.S.C. § 102(b) as being anticipated by Dale *et al.* (hereinafter "Dale"). Applicants respectfully traverse.

"[T]o hold that a prior art reference anticipates a claim, the Board must expressly find that every limitation in the claim was identically shown in the single reference." *Gechter v. Davidson*, 116 F.3d 1454, 1460 (Fed. Cir. 1997).

The Examiner alleges that Dale teaches a granulate comprising granules which comprise an enzyme coated with a polyolefin, where the polyolefin is polyethylene. Applicants strongly disagree. Rather Dale discloses granules with polymer coatings of PVA, PVP and/or

polyethylene glycol (PEG) (see abstract and col. 2, lines 30-37). None of the polymer coatings disclosed in Dale is a polyolefin. The Examiner refers to various sections in Dale for allegedly disclosing polyethylene, such as at col. 2, line 37. However, Dale recites polyethylene glycol (PEG) not polyethylene. PEG is not a polyolefin. PEG belongs to a group of compounds referred to as polyether compounds, which are a totally different group of compounds than the polyolefins presently claimed (*i.e.* polyethylene, polypropylene, polybutylene, and /or polybutadiene) (see attached). Because Dale does not teach every limitation of the claims, Dale cannot anticipate the claims. Reconsideration and withdrawal of this rejection is respectfully requested.

Claims 33-34, 38-39, 42, 44-50 and 52 are rejected under 35 U.S.C. § 102(e) as being anticipated by De Lima *et al.* (hereinafter "De Lima"). Applicants respectfully traverse.

The Examiner alleges that De Lima discloses granules coated with polyolefin, wherein polyolefin is polyethylene. Applicants strongly disagree. Rather De Lima discloses coating with polyethylene glycol (PEG) (see col. 11, line 45). As discussed above, PEG is not a polyolefin and PEG belongs to a totally different group of compounds. Nowhere in De Lima is there disclosure of any polyolefin. Because De Lima does not teach every limitation of the claims, De Lima cannot anticipate the claims. Reconsideration and withdrawal of this rejection is respectfully requested.

Rejections under 35 U.S.C. § 103

Claims 35-37, 40 and 43 were rejected under 35 U.S.C. § 103(a) as being obvious over Dale in view of Masschelein *et al.* ("Masschelein"). Applicants respectfully traverse.

The Examiner relies on Dale for allegedly teaching a granule coated with a polyolefin. The explanations provided above for Dale are equally applicable to this rejection and are incorporated herein in their entirety. Dale does not teach or suggest a granule coated with a polyolefin, as explained above. Masschelein does not remedy the deficiencies of Dale. Masschelein relates to a fabric treatment composition. Dale and Masschelein, alone or in combination, fail to teach or suggest the presently claimed granulate comprising granules which

comprise an enzyme coated with a polyolefin. Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

CONCLUSION

For at least the above reasons, Applicants respectfully request withdrawal of the rejections and allowance of the claims. If any outstanding issues remain, the Examiner is invited to telephone the undersigned at the number given below.

Please note that a new Power of Attorney with change of correspondence address was submitted to the USPTO on August 28, 2008; however the attorneys of record and correspondence address have yet to be changed. Applicants respectfully request that these changes be promptly entered and all future correspondence be directed appropriately to the correct attorneys and address.

Applicants have attached herewith a Request for Continued Examination with the required fee authorization. Accompanying this response is also a petition for a five-month extension of time to and including November 3, 2008 with the required fee authorization. No further fee is believed due. However, if an additional fee is due, the Director is authorized to charge our Deposit Account No. 03-2775, under Order No. 12810-00749-US from which the undersigned is authorized to draw.

Respectfully submitted,

By 

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polyolefin

Science and Technology Dictionary

polyolefin (ˌpäl·ē'ōl·ə·fən)

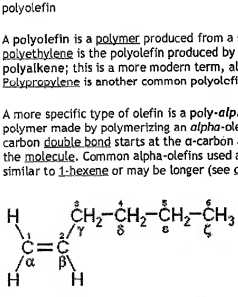
(*organic chemistry*) A resinous material made by the polymerization of olefins, such as polyethylene from ethylene, polypropylene from propylene, or polybutene from butylene.

Wikipedia

polyolefin

A **polyolefin** is a polymer produced from a simple olefin, or alkene as a monomer. For example, polyethylene is the polyolefin produced by polymerizing the olefin ethylene. An equivalent term is **polyalkene**; this is a more modern term, although ***polyolefin*** is still used in the petrochemical industry. Polypropylene is another common polyolefin which is made from propylene.

A more specific type of olefin is a **poly-*alpha*-olefin** (or poly-α-olefin, sometimes abbreviated as PAO), a polymer made by polymerizing an *alpha*-olefin. An ***alpha*-olefin** (or α-olefin) is an alkene where the carbon-carbon double bond starts at the α-carbon atom, i. e. the double bond is between the #1 and #2 carbons in the molecule. Common alpha-olefins used as co-monomers to give a polymer alkyl branching groups are similar to 1-hexene or may be longer (see chemical structure below).



1-hexene, an example of an alpha-olefin

Many poly-alpha-olefins have flexible alkyl branching groups on every other carbon of their polymer backbone chain. These alkyl groups, which can shape themselves in numerous conformations, make it very difficult for the polymer molecules to line themselves up side-by-side in an orderly way. Therefore, many poly-alpha-olefins do not crystallize or solidify easily and are able to remain oily, viscous liquids even at lower temperatures. Low molecular weight poly-*alpha*-olefins are useful as synthetic lubricants such as synthetic motor oils for vehicles used in a wide temperature range.

Even polyethylenes copolymerized with a small amount of alpha-olefins (such as 1-hexene, 1-octene, or longer) are more flexible than simple straight chain high density polyethylene, which has no branching. The methyl branch groups on a polypropylene polymer are not long enough to make typical commercial polypropylene more flexible than polyethylene.

more info: http://www.fabriclink.com/University/Polyolefin.cfm

This entry is from Wikipedia, the leading user-contributed **encyclopedia**. It may not have been reviewed by

Answers.com™

polyethylene glycol

Dictionary

The American Heritage dictionary

polyethylene glycol
n.

Any of a family of colorless liquids with high molecular weight that are soluble in water and in many organic solvents and are used in detergents and as emulsifiers and plasticizers.

Medical

HOUGHTON MIFFLIN COMPANY

pol·y·eth·yl·ene glycol (pŏl'ē-ĕth'ə-lēn')
n.

Any of a family of high molecular weight compounds that can be liquid or waxlike in consistency, are soluble in water and in many organic solvents, and are used in detergents and as emulsifiers and plasticizers.

Wikipedia

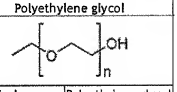
Polyethylene glycol

Polyethylene glycol (PEG) and **polyethylene oxide** (PEO) are polymers having an identical structure, and are the most commercially important polyethers. Poly(ethylene glycol) or poly (ethylene oxide) refers to an oligomer or polymer of ethylene oxide. PEG and PEO are liquids or low-melting solids, depending on their molecular weights. Both are prepared by polymerization of ethylene oxide. While PEG and PEO with different molecular weights find use in different applications and have different physical properties (e.g. viscosity) due to chain length effects, their chemical properties are nearly identical. Derivatives of PEG and PEO are in common use, the most common derivative being the methyl ether (methoxypoly (ethylene glycol)), abbreviated mPEG.

Their melting points vary depending on the Formula Weight of the polymer. PEG or PEO has the following structure:

$$HO\text{-}(CH_2\text{-}CH_2\text{-}O)_n\text{-}H$$

The numbers that are often included in the names of PEGs and PEOs indicate their average molecular weights, e.g. a PEG with n=80 would have an average molecular weight of approximately 3500 Daltons and would be labeled PEG 3500. Most PEGs and PEOs include molecules with a distribution of molecular weights, i.e. they are polydisperse. The size distribution can be characterized statistically by its weight average molecular weight (Mw) and its number average molecular weight (Mn), the ratio of which is

Polyethylene glycol	
	
Chemical name	Polyethylene glycol
Chemical formula	$C_{2n}H_{4n+2}O_{n+1}$
Molecular mass	44n+18 g/mol
CAS number	[25322-68-3]
Density	1.1 - 1.2 g/cm³
Melting point	varies
Boiling point	xx.x °C
Flash Point	182 - 287 °C
SMILES	xxxx
Disclaimer and references	

polyethylene oxide	
Image:Polyethylene oxide.jpg	
Chemical name	poly(ethylene oxide)
Chemical formula	$C_{2n}H_{4n+2}O_{n+1}$
Molecular mass	44n+18 g/mol
CAS number	[xx-xx-xx]
Density	x.xxx g/cm³

called the polydispersity index (Mw/Mn). Mw and Mn can be measured by mass spectroscopy.

Melting point	xx.x °C
Boiling point	xx.x °C
SMILES	xxxx
Disclaimer and references	

PEGylation is the act of covalently coupling a PEG structure to another larger molecule, for example, a therapeutic protein (which is then referred to as PEGylated). PEGylated interferon alfa-2a or -2b is a commonly used injectable treatment for Hepatitis C infection.

PEG is soluble in water, methanol, benzene, dichloromethane and is insoluble in diethyl ether and hexane. It is coupled to hydrophobic molecules to produce non-ionic surfactants.

Clinical uses

Poly(ethylene glycol) is non-toxic and is used in a variety of products. It is the basis of a number of laxatives (e.g. macrogol-containing products such as Movicol® and polyethylene glycol 3350, or MiraLax® or GlycoLax). It is the basis of many skin creams, as *cetomacrogol*, and sexual lubricants, frequently combined with glycerin. Whole bowel irrigation (polyethylene glycol with added electrolytes) is used for bowel preparation before surgery or colonoscopy and drug overdoses. It is sold under the brand names GoLYTELY, GlycoLax and Colyte. When attached to various protein medications, poly(ethylene glycol) allows a slowed clearance of the carried protein from the blood. This makes for a longer acting medicinal effect and reduces toxicity, and it allows longer dosing intervals. Examples include PEG-interferon alpha which is used to treat hepatitis C and PEG-filgrastim (Neulasta®) which is used to treat neutropenia. It has been shown that poly (ethylene glycol) can improve healing of spinal injuries in dogs [1]. One of the earlier findings that poly (ethylene glycol) can aid in nerve repair came from the University of Texas (Krause and Bittner) [2]. Poly (ethylene glycol) is commonly used to fuse B-cells with myeloma cells in monoclonal antibody production.

Other uses

PEG is used in a number of toothpastes as a dispersant; it binds water and helps keep gum uniform throughout the toothpaste. It is also under investigation for use in body armor [3] and tattoos to monitor diabetes[4]. Functional groups of PEG give polyurethane elastomers their "rubberiness", for applications such as foams (foam rubber) and fibers (spandex). Its backbone structure is analogous to that of silicone, another elastomer.

Since PEG is a flexible, water-soluble polymer, it can be used to create very high osmotic pressures (tens of atmospheres). It also is unlikely to have specific interactions with biological chemicals. These properties make PEG one of the most useful molecules for applying osmotic pressure in biochemistry experiments, particularly when using the osmotic stress technique. [5]

PEO (poly(ethylene oxide)) can serve as the separator and electrolyte solvent in lithium polymer cells. Its low diffusivity often requires high temperatures of operation, but its high viscosity even near its melting point allows very thin electrolyte layers. While crystallization of the polymer can degrade performance, many of the salts used to carry charge can also serve as a kinetic barrier to the formation of crystals. Such batteries carry greater energy for their weight than other lithium ion battery technologies.

Poly(ethylene glycol) is also commonly used as a polar stationary phase for gas chromatography, as well as a heat transfer fluid in electronic testers.

PEG is included in many or all formulations of the soft drink Dr Pepper, purportedly as an anti-foaming agent.

PEG has also been used to preserve objects which have been salvaged from underwater, as was the case with the warship Vasa in Stockholm. It replaces water in wooden objects to prevent them from shrinking when dried. [6]

PEG is a often seen (as a side effect) in mass spectrometry experiments with characteristic fragmentation patterns [[7]].

External links

- Link page to external chemical sources.